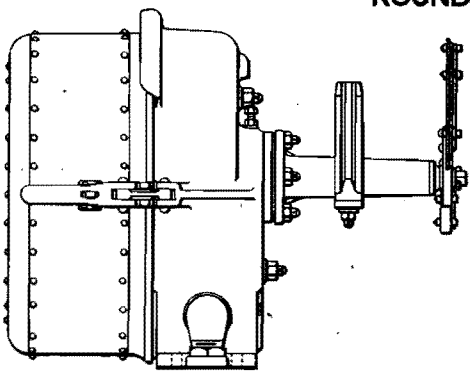
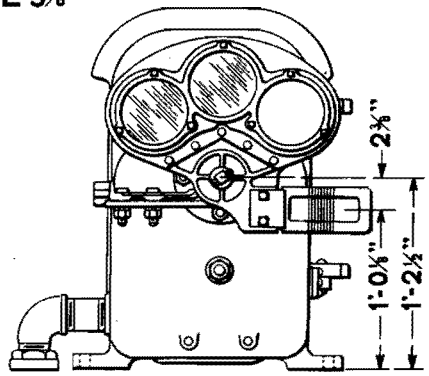
THE UNION SWITCH & SIGNAL CO.

DIAMETER OF ROUNDEL 5⅜"



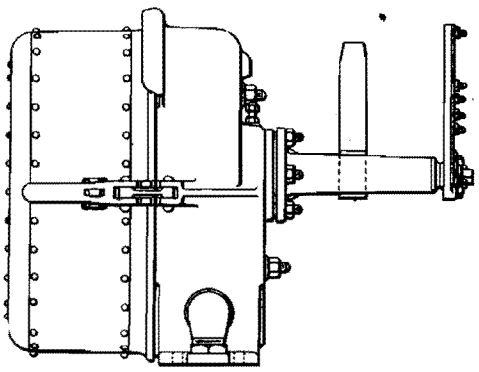
SIDE VIEW



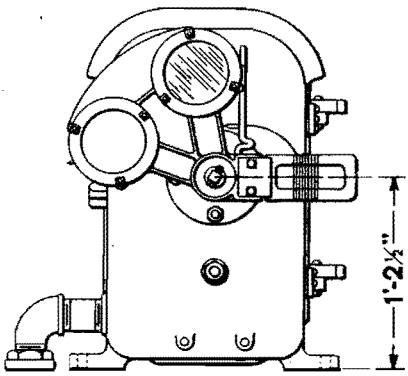
FRONT VIEW

A

DIAMETER OF ROUNDEL 5⅜"



SIDE VIEW



FRONT VIEW

B

ONE ARM ELECTRIC DWARF SIGNALS
STYLE "T-2" D. C.

THE UNION SWITCH & SIGNAL CO.

ONE ARM ELECTRIC DWARF SIGNALS
STYLE "T-2" D. C.

Unless otherwise specified in the order, signals will be furnished as illustrated.

The circuit controllers are equipped with only such contacts as are required for the operation of the signals. If extra contacts are required, the order should specify the number and state where circuits are to make and break, considering the stop position as 0 degree, or submit a wiring diagram.

Order should specify number and color of roundels.

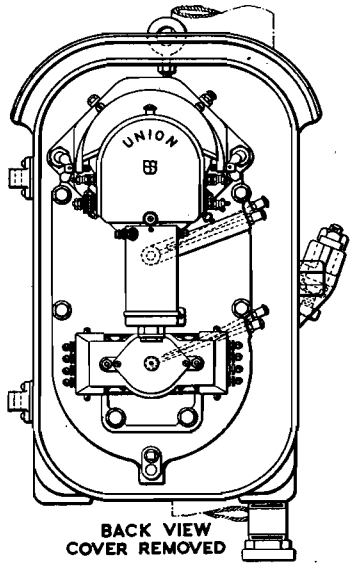
Lamps are not included and should be ordered separately if desired.

Order by Name, Plate, Figure and Instructions given above.

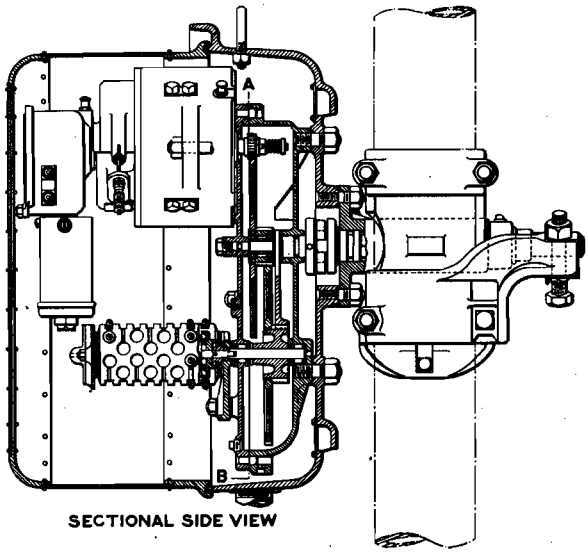
The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
A	One Arm 90 Deg. Three Position Upper Quadrant Dwarf Signal, as shown	C–7949	
Aa	One Arm 0 Deg. to 45 Deg. Two Position Upper Quadrant Dwarf Signal	31–C–7949	
B	One Arm 60 Deg. Two Position Lower Quadrant Dwarf Signal, as shown	40–C–7949	

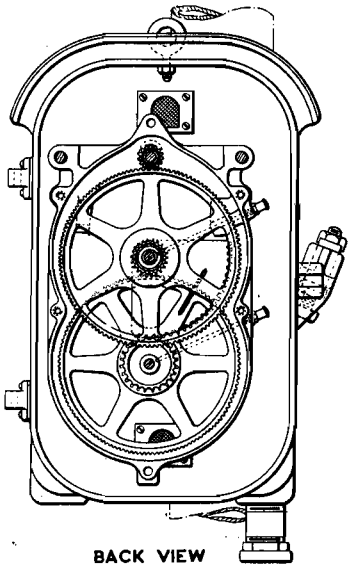
THE UNION SWITCH & SIGNAL CO.



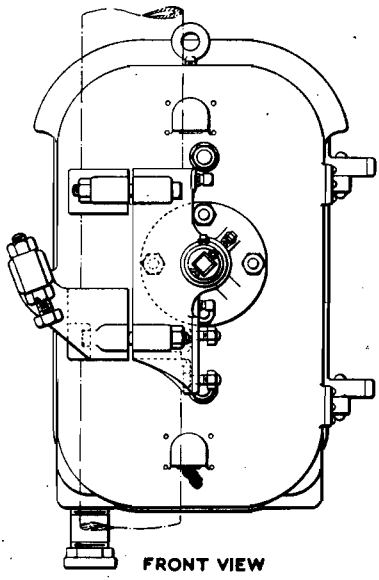
BACK VIEW
COVER REMOVED



SECTIONAL SIDE VIEW



BACK VIEW
COVER REMOVED & SECTION THROUGH A-B



FRONT VIEW

A

MECHANISM, MECHANISM CASE AND BEARING FOR RIGHT HAND UPPER QUADRANT STYLE "T-2" D. C. TOP POST SIGNALS

THE UNION SWITCH & SIGNAL CO.

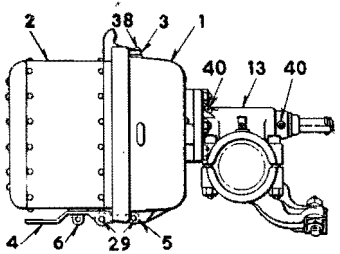
MECHANISM, MECHANISM CASE AND BEARING FOR RIGHT HAND UPPER QUADRANT STYLE "T-2" D. C. TOP POST SIGNALS

The circuit controllers furnished with the mechanisms listed below are not equipped with the pole changing feature, and if required must be specified. If extra contacts are required on circuit controller, give the position of signal blade where circuits are to make and break, considering the stop position as 0 degree, or submit a wiring diagram.

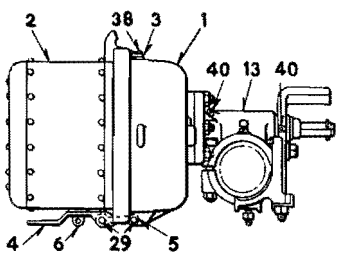
Order by Name, Plate, Figure and Instructions given above.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

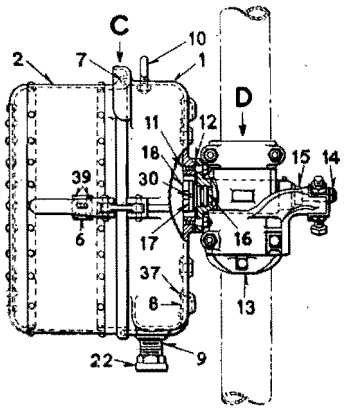
Fig.		Drawing Reference	
A	Mechanism, Mechanism Case and Bearing, for 5″ pipe post and 90 deg. three position upper quadrant signal, complete as shown. Stop on bearing arranged for semaphore casting, Fig. A, Plate G-101	10–D–1584 186–C–7581	
Aa	Mechanism, Mechanism Case and Bearing, for 5″ pipe post and 45 deg. to 90 deg. two position upper quadrant signal. Stop on bearing arranged for semaphore casting, Fig. A, Plate G-101	10–D–1584 187–C–7581	
Ab	Mechanism, Mechanism Case and Bearing, for 5″ pipe post and 90 deg. three position upper quadrant permissive signal. Stop on bearing arranged for semaphore casting, Fig. C, Plate G-101	10–D–1584 189–C–7581	
Ac	Mechanism, Mechanism Case and Bearing, for 5″ pipe post and 90 deg. two position upper quadrant staggered light signal. Stop on bearing arranged for semaphore casting, Fig. D, Plate G-101	10–D–1584 188–C–7581	



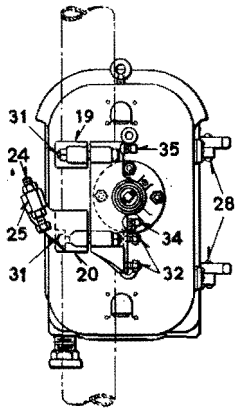
PLAN VIEW



PLAN VIEW

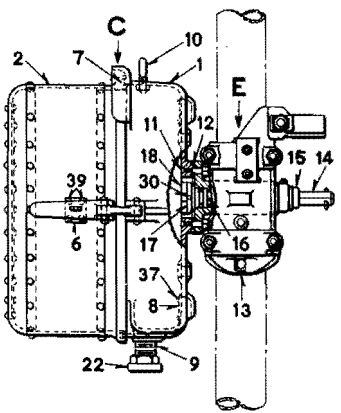


SIDE VIEW

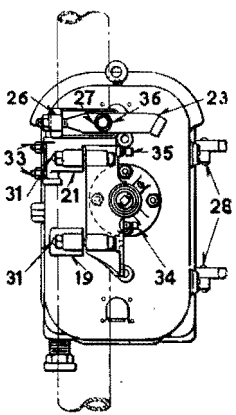


END VIEW

A



SIDE VIEW



END VIEW

B

CASES AND BEARINGS FOR RIGHT HAND UPPER QUADRANT
STYLE "T-2" D. C. TOP POST SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

PLATE-G 91

THE UNION SWITCH & SIGNAL CO.

CASES AND BEARINGS FOR RIGHT HAND UPPER QUADRANT STYLE "T-2" D. C. TOP POST SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
A	Case and Bearing, for right hand upper quadrant top post signal mechanism, for application to 5″ pipe post, complete as shown. Stop on bearing arranged for semaphore casting, Fig. A, Plate G-101, (1-C, 1-D)	186–C–7581	
Aa	Case and Bearing, for right hand upper quadrant top post signal mechanism, for application to 5″ pipe post complete. Stop on bearing arranged for semaphore casting, Fig. A, Plate G-101. Operating from 45 deg. to 90 deg. only, (1-C, 1-Da)	187–C–7581	
Ab	Case and Bearing, for right hand upper quadrant top post signal mechanism, for application to 5″ pipe post complete. Stop on bearing arranged for permissive semaphore casting, Fig. C, Plate G-101, (1-C, 1-Db)	189–C–7581	
B	Case and Bearing, for right hand upper quadrant top post signal mechanism, with staggered light, for application to 5″ pipe post, complete as shown. Stop on bearing arranged for semaphore casting, Fig. D, Plate G-101, (1-C, 1-E)	188–C–7581	
C	Case, with cover, complete as shown, (1-1, 1-2, 1-12, 1-22, 2-28)	186–C–7581	
D	Combined Clamp and Bearing, for 5″ pipe, complete as shown. Stop arranged for semaphore casting, Fig. A, Plate G-101, (1-13, 1-14a, 1-15, 1-16, 1-18, 1-19, 1-20a, 4-31, 2-32)	186–C–7581	
Da	Combined Clamp and Bearing, for 5″ pipe complete. Stop arranged for semaphore casting, Fig. A, Plate G-101. Operating from 45 deg. to 90 deg. only, (1-13, 1-14a, 1-15, 1-16, 1-18, 1-19, 1-20c, 4-31, 2-32)	187–C–7581	
Db	Combined Clamp and Bearing, for 5″ pipe complete. Stop arranged for permissive semaphore casting, Fig. C, Plate G-101, (1-13, 1-14a, 1-15, 1-16, 1-18, 1-19, 1-20e, 4-31, 2-32)	189–C–7581	

THE UNION SWITCH & SIGNAL CO.

CASES AND BEARINGS FOR RIGHT HAND UPPER QUADRANT STYLE "T-2" D. C. TOP POST SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
E	Combined Clamp and Bearing, for 5″ pipe and signal with staggered light, complete as shown. Stop arranged for semaphore casting, Fig. D, Plate G-101, (1-13, 1-14a, 1-15, 1-16, 1-18, 1-19, 1-21a, 4-31, 2-33)	188–C–7581	
1	Case, C. I. Pat. No. 20864, with two hinge lugs and six ¼″x1″ rd. hd. rivets, Fig. 3, hasp link, Fig. 5, hasp, Fig. 4, two ⅜″x2⅛″ pins, Fig. 29, two ventilators and eight No. 10-30x⅜″ rd. hd. mach. screws, Fig. 8. 2″ nipple, Fig. 9, eye bolt and ½″ hex. nut, Fig. 10, four studs and ⅝″ hex. nuts, Fig. 11	4–C–8079	
2	Cover, with hasp keeper and rivets, Fig. 6, and ⅜″x ⅜″x5′—11″ flax packing, Fig. 7	20–C–8079	
3	Hinge Lug, C. I. Pat. No. 21185, with three ¼″x1″ rd. hd. rivets, Fig. 38, for case, Fig. 1	7–C–8079	
4	Hasp only, M. I. Pat. No. 15751, for case. Fig. 1	56–8299	
4a	as above, with link and two ⅜″x2⅛″ pins, (1-4, 1-5, 2-29)		
5	Hasp Link only, M. I. Pat. No. 15752, for case, Fig. 1	28–C–8079	
6	Hasp Keeper, M. I. Pat. No. 7443, with four ¼″x⅜″ csk. hd. rivets, Fig. 39. for cover, Fig. 2	4–B–8191	
7	Flax Packing only, ⅜″x⅜″x5′—11″ long, for cover, Fig. 2		
8	Ventilator, with four No. 10-30x⅜″ rd. hd. mach. screws, for case, Fig. 1, (1-8a, 1-8b, 4-37)	31–B–7318	
8a	Wire Gauze only, for ventilator, Fig. 8	30–B–7318	
8b	Plate only, for ventilator, Fig. 8	29–B–7318	
9	2″ Nipple only, 4″ long, for case, Fig. 1	17–B–10375	
10	Eye Bolt, with ½″ hex. nut, for case, Fig. 1	104–8034	
11	Stud, with ⅝″ hex. nut, for case, Fig. 1	100–8071	
12	Gasket only, used between case, Fig. 1, and bearing, Fig. 13	714–8078	

THE UNION SWITCH & SIGNAL CO.

CASES AND BEARINGS FOR RIGHT HAND UPPER QUADRANT STYLE "T-2" D. C. TOP POST SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
13	Combined Clamp and Bearing, C. I. Pat. No. 21592, with one 5/8"x1 1/2" and one 5/8"x1 1/4" cupped point set screws, Figs. 34 and 35, and two 1/4" pipe plugs, Fig. 40, for bearings, Figs. D, Da, Db and E	35–C–7554	
14	Semaphore Shaft, with one 5/16"x1 1/2" cotter and one No. 10x3 3/8" pin, Fig. 30, Figs. D, Da, Db and E	285–8026	
14a	as above, with coupling, (1-14, 1-17)		
15	Front Journal only, C. B. Pat. No. 21011, Figs. D, Da, Db and E	75–8093	
16	Rear Journal only, C. B. Pat. No. 14240, Figs. D, Da, Db and E	52–8093	
17	Coupling only, for rear end of semaphore shaft, Fig. 14	20–C–7554	
17a	as above, with one No. 10x3 3/8" pin, (1-17, 1-30)		
18	Intermediate Coupling only, Figs. D, Da, Db and E	31–C–7554	
19	Cap only, M. I. Pat. No. 8021, used as upper cap on Figs. D, Da and Db, and as lower cap on Fig. E	21–B–6821	
20	Lower Cap and Stop only, M. I. Pat. No. 15722, for bearing, Fig. D	49–B–6821	
20a	as above, with stop bolt, two nuts and nut lock washer, (1-20, 1-24, 1-25)	50–B–6821	
20b	Lower Cap and Stop only, M. I. Pat. No. 15721, for bearing, Fig. Da	47–B–6821	
20c	as above, with stop bolt, two nuts and nut lock washer, (1-20b, 1-24, 1-25)	48–B–6821	
20d	Lower Cap and Stop only, M. I. Pat. No. 15761, for bearing, Fig. Db	54–B–6821	
20e	as above, with stop bolt, two nuts and nut lock washer, (1-20d, 1-24, 1-25)	55–B–6821	
21	Upper Cap only, M. I. Pat. No. 15717, for bearing, Fig. E	53–B–6821	
21a	as above, with stop, 3/4" hex. nut, nut lock washer, 5/8" washer and one 5/8"x1 1/2" tap bolt, (1-21, 1-23, 1-26, 1-27, 1-36)	158–B–9716	

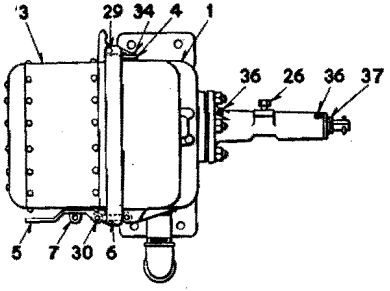
THE UNION SWITCH & SIGNAL CO.

CASES AND BEARINGS FOR RIGHT HAND UPPER QUADRANT STYLE "T-2" D. C. TOP POST SIGNAL MECHANISMS

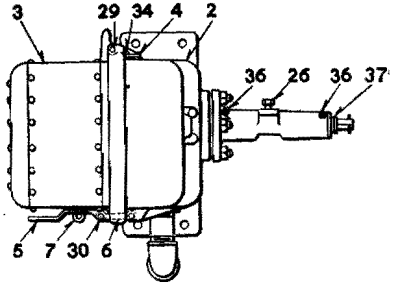
Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

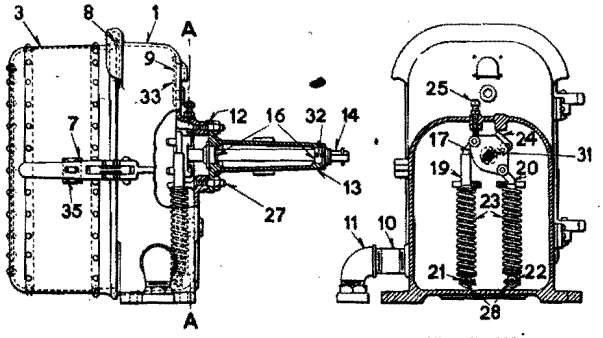
Fig.		Drawing Reference	
22	Insulating Bushing only, 2″, for wire inlet		
23	Stop, with ¾″ hex. nut only, used with upper cap Fig. 21, Fig. E	157–B–9716	
24	Stop Bolt, hex. hd., ¾″x4¾″, with one standard and one thin hex. nut only, used with lower caps, Figs. 20, 20b and 20d	83–8099	
24a	as above, with nut lock washer, (1-24, 1-25)		
25	Nut Lock Washer only, for stop bolt, Fig. 24	315–8486	
26	Nut Lock Washer only, for stop, Fig. 23	216–8486	
27	Washer only, ⅝″, used with tap bolt, Fig. 36	8–7824	
28	Pin only, ⅜″x2½″, cupped ends, for fastening cover, Fig. 2, to case, Fig. 1	30–B–10207	
29	Pin only, ⅜″x2⅛″, cupped ends, for fastening hasp link, Fig. 5, to case, Fig. 1, and hasp, Fig. 4, to hasp link, Fig. 5	27–B–10207	
30	Pin only, No. 10-3⅜″, for fastening coupling, Fig. 17, to semaphore shaft, Fig. 14	594–8097	
31	Bolt, sq. hd., ⅝″x5½″, and hex. nut, for fastening caps, Figs. 19, 20, 20b, 20d and 21, to bearing, Fig. 13		
32	Bolt, sq. hd., ½″x1¾″, and hex. nut, for fastening lamp bracket to bearing, Fig. 13		
33	Bolt, sq. hd., ½″x1½″, and hex. nut, for fastening lamp bracket to upper cap, Fig. 21		
34	Set Screw only, cupped point, ⅝″x1½″, for bearing, Fig. 13, below shaft		
35	Set Screw only, cupped point, ⅝″x1¼″, for bearing, Fig. 13, above shaft		
36	Tap Bolt only, ⅝″x1½″, for fastening stop, Fig. 23, to upper cap, Fig. 21		
37	Mach. Screw, rd. hd., No. 10-30x⅜″, for fastening ventilator, Fig. 8, to case		
38	Rivet only, rd. hd., ¼″x1″, for fastening hinge lug, Fig. 3, to case, Fig. 1		
39	Rivet only, csk. hd., ¼″x⅜″, for fastening hasp keeper, Fig. 6, to cover, Fig. 2		
40	Pipe Plug only, ¼″ std., for bearing, Fig. 13		



PLAN VIEW



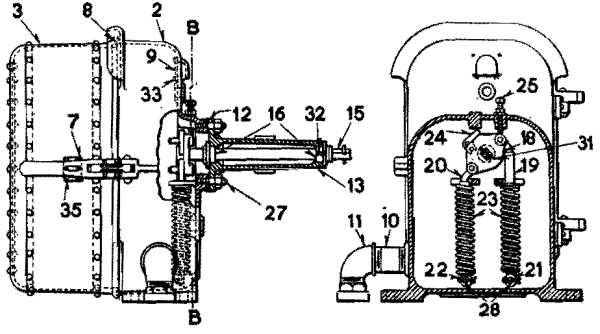
PLAN VIEW



SIDE VIEW

END VIEW
SECTION A-A

A



SIDE VIEW

END VIEW
SECTION B-B

B

CASES AND BEARINGS FOR STYLE "T-2" D. C. DWARF SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

PLATE G-92

THE UNION SWITCH & SIGNAL CO.

CASES AND BEARINGS FOR STYLE "T-2" D. C. DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
A	Case and Bearing, for two or three position right hand upper quadrant dwarf signal mechanism, as shown, (1-1, 1-3, 1-12, 1-13, 1-14, 2-16, 1-17, 1-19, 1-20, 1-21, 1-22, 2-23, 1-24, 2-26, 2-28, 2-29, 6-32, 1-37)...	35-C-7949	
B	Case and Bearing, for 60 deg. two position right hand lower quadrant dwarf signal mechanism, as shown, (1-2, 1-3, 1-12, 1-13, 1-15, 2-16, 1-18, 1-19, 1-20, 1-21, 1-22, 2-23, 1-24, 2-26, 2-28, 2-29, 6-32, 1-37)...	38-C-7949	
1	Case C. I. Pat. No. 21309, with two hinge lugs and six ¼″x1″ rd. hd. rivets, Fig. 4, hasp link, Fig. 6, hasp, Fig. 5, two ⅜″x2⅛″ pins, Fig. 30, two ventilators with eight No. 10-30x⅜″ rd. hd. mach. screws, Fig. 9, 2″ nipples, Fig. 10, 2″ street ell, Fig. 11, one ½″x2¾″ cap screw and thin hex. nut, Fig. 25, four studs and ⅝″ hex. nuts, Fig. 27, for upper quadrant signal, Fig. A.....	1-C-8143	
2	Case, C. I. Pat. No. 21309-1, with two hinge lugs and six ¼″x1″ rd. hd. rivets, Fig. 4, hasp link, Fig. 6, hasp, Fig. 5, two ⅜″x2⅛″ pins, Fig. 30, two ventilators with eight No. 10-30x⅜″ rd. hd. mach. screws, Fig. 9, 2″ nipples, Fig. 10, 2″ street ell, Fig. 11, one ½″x2¾″ cap screw and thin hex. nut, Fig. 25, four studs and ⅝″ hex. nuts, Fig. 27, for lower quadrant signal, Fig. B.....	2-C-8143	
3	Cover, with hasp keeper and rivets, Fig. 7, and ⅜″x ⅜″x5′—11″ flax packing, Fig. 8, Figs. A and B.....	20-C-8079	

THE UNION SWITCH & SIGNAL CO.

CASES AND BEARINGS FOR STYLE "T-2" D. C. DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
4	Hinge Lug, C. I. Pat. No. 21185, with three ¼″x1″ rd. hd. rivets, Fig. 34, for cases, Figs. 1 and 2	7–C–8079	
5	Hasp only, M. I. Pat. No. 15751, for cases, Figs. 1 and 2	56–8299	
5a	as above, with link and two ⅜″x2⅛″ pins, (1-5, 1-6. 2-30)		
6	Hasp Link only, M. I. Pat. No. 15752, for cases, Figs. 1 and 2	28–C–8079	
7	Hasp Keeper, M. I. Pat. No. 7443, with four ¼″x⅜″ csk. hd. rivets, Fig. 35, for cover, Fig. 3	4–B–8191	
8	Flax Packing only, ⅜″x⅜″x5′—11″ long, for cover, Fig. 2		
9	Ventilator, with four No. 10-30x⅜″ rd. hd. mach. screws, for cases, Figs. 1 and 2, (1-9a, 1-9b, 4-33)	31–B–7318	
9a	Wire Gauze only, for ventilator, Fig. 9	30–B–7318	
9b	Plate only, for ventilator, Fig. 9	29–B–7318	
10	2″ Nipple only, 4″ long, for cases, Figs. 1 and 2	17–B–10375	
11	2″ Street Ell only, for cases, Figs. 1 and 2		
12	Gasket only, used between case, Fig. 1 and 2, and semaphore bearing, Fig. 13	714–8078	
13	Semaphore Bearing, C. I. Pat. No. 21310, with two ¼″ pipe plugs, Fig. 36, only, Figs. A and B	4–C–8143	
13a	as above, with semaphore shaft, coupling, two journals, six ¼″-20x⅝″ flat hd. mach. screws, two ½″x1″ tap bolts and washer, Fig. A, (1-13, 1-14, 2-16, 1-17, 2-26, 6-32, 1-37)		
13b	as above, substituting shaft and couplings, Figs. 15 and 18, for Figs. 14 and 17, Fig. B, (1-13, 1-15, 2-16, 1-18, 2-26, 6-32, 1-37)		

THE UNION SWITCH & SIGNAL CO.

CASES AND BEARINGS FOR STYLE "T-2" D. C. DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
14	Semaphore Shaft, with one ¼"x1½" cotter and one No. 10x1⅞" pin, Fig. 31, only, Fig. A	330–8026	
14a	as above, with coupling, (1-14, 1-17)		
15	Semaphore Shaft, with one ¼"x1½" cotter and one No. 10x1⅞" pin, Fig. 31, only, Fig. B	346–8026	
15a	as above, with coupling, (1-15, 1-18)		
16	Journal only, C. B. Pat. No. 20142, for semaphore bearing, Fig. 13	47–8093	
17	Coupling, with three studs only, for semaphore shaft, Fig. 14	7–C–8143	
18	Coupling, with three studs only, for semaphore shaft, Fig. 15	18–C–8143	
19	Spring Guide, with eye rod and socket, for compressing spring from the top, Figs. A and B	10–C–8143	
20	Spring Guide, with eye rod and socket, for compressing spring from the bottom, Figs. A and B	12–C–8143	
21	Spring Guide Plunger, with socket only, for spring guide, Fig. 19	42–B–10394	
22	Spring Guide Plunger only, for spring guide, Fig. 20	44–B–10394	
23	Spring only, Figs. A and B	209–7770	
24	Pawl only, Figs. A and B	8–C–8143	
25	Cap Screw only, ½"x3", with ½" thin hex. nut for cases, Figs. 1 and 2	49–8099	
26	Tap Bolt only, ½"x1", for fastening lamp bracket to semaphore bearing, Fig. 13		

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CASES AND BEARINGS FOR STYLE "T-2" D. C. DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
27	Stud, with 5/8" hex. nut, for fastening semaphore bearing, Fig. 13, to cases, Figs. 1 and 2	100–8071	
28	Pin, cheese hd., 1/2"x2 5/16", with one 1/8"x3/4" cotter, for fastening spring guide plungers, Figs. 21 and 22, to cases, Figs. 1 and 2	5–B–10214	
29	Pin only, 3/8"x2 1/2", cupped ends, for fastening cover, Fig. 3, to cases, Figs. 1 and 2	30–B–10207	
30	Pin only, 3/8"x2 1/8", cupped ends, for fastening hasp, Fig. 5, to hasp link, Fig. 6; also for fastening hasp link, Fig. 6, to cases, Figs. 1 and 2	27–B–10207	
31	Pin only, No. 10x1 7/8", for fastening couplings, Figs. 17 and 18, to semaphore shafts, Figs. 14 and 15	600–8097	
32	Mach. Screw only, flat hd., 1/4"-20x5/8", for fastening journal, Fig. 16, to semaphore bearing, Fig. 13		
33	Mach. Screw only, rd. hd., No. 10-30x3/8", for fastening ventilators, Fig. 9, to cases, Figs. 1 and 2		
34	Rivet only, rd. hd., 1/4"x1", for fastening hinge lug, Fig. 4, to cases, Figs. 1 and 2		
35	Rivet only, csk. hd., 1/4"x3/8", for fastening hasp keeper, Fig. 7, to cover, Fig. 3		
36	Pipe Plug only, 1/4" Std., for semaphore bearing, Fig. 13		
37	Washer only, 1", for semaphore shafts, Figs. 14 and 15	125–7826	

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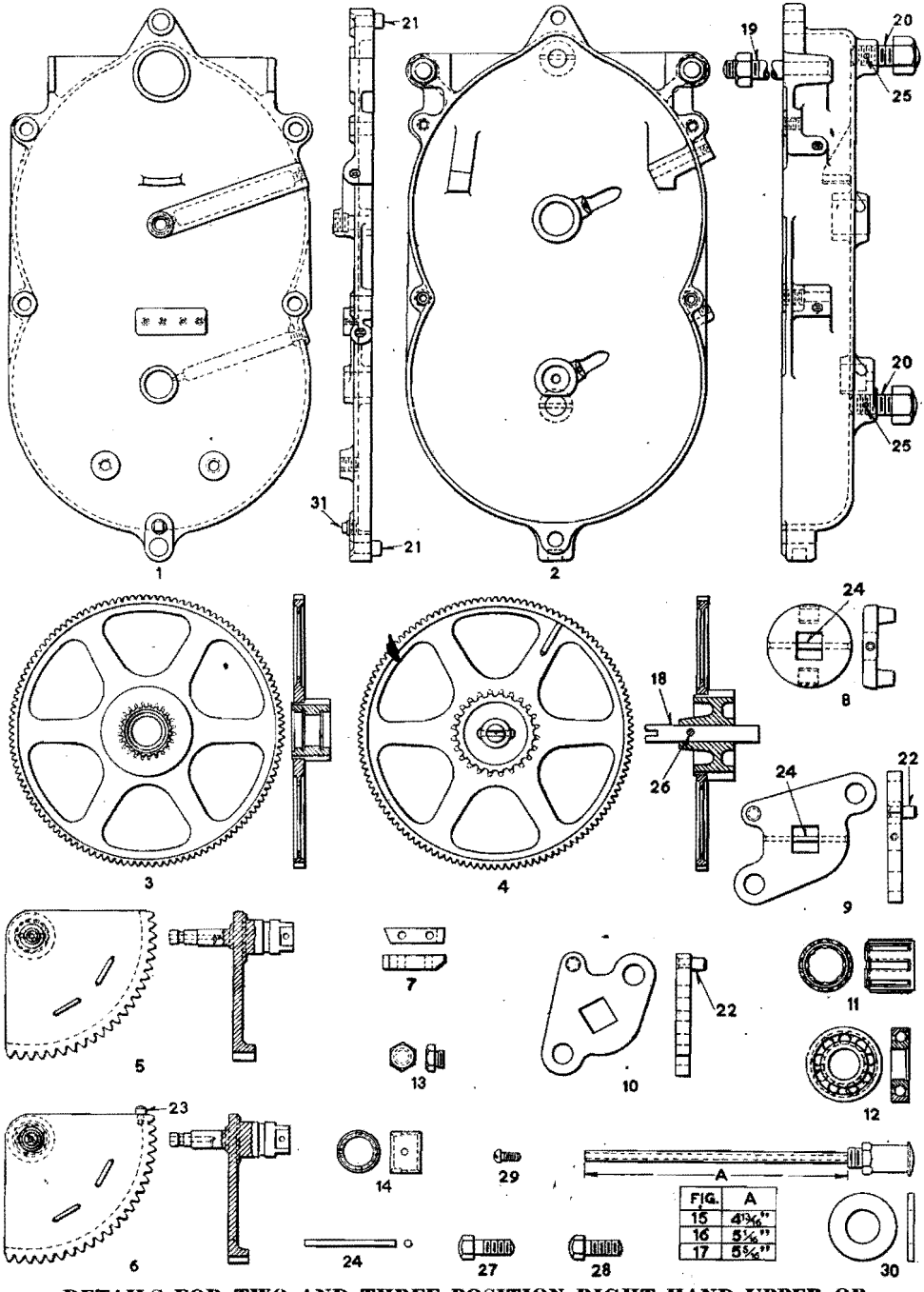


DETAILS FOR TWO AND THREE POSITION RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

DETAILS FOR TWO AND THREE POSITION RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

Parts listed below are interchangeable for top post and dwarf signal mechanisms, except items otherwise noted.

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
1	Front Plate, C. I. Pat. No. 21376, with two studs, Fig. 21, and plug, Fig. 31, as shown	30-C-8079	
2	Frame, C. I. Pat. No. 21377, with two studs and hex. nuts, Fig. 19, and two studs and hex. nuts, Fig. 20, and two pins, Fig. 25, for a top post signal mechanism, as shown	31-C-8079	
2a	Frame, C. I. Pat. No. 21377, with two studs and hex. nuts, Fig. 19, one stud and hex. nut, Fig. 20, one stud and hex. nut, Fig. 20a, and two pins, Fig. 25, for a 90 degree dwarf signal mechanism	31-C-8079	
2b	Frame, C. I. Pat. No. 21377-1, with stop, Fig. 7, and two No. 14-24x11/16" rd. hd. mach. screws, Fig. 29, two studs and hex. nuts, Fig. 19, one stud and hex. nut, Fig. 20, one stud and hex. nut, Fig. 20a, and two pins, Fig. 25, for a 60-degree right hand lower quadrant dwarf signal mechanism	32-C-8079 115-8425	
3	Intermediate Gear and Pinion, as shown	133-8424	
4	Segment Driver, with shaft, Fig. 18, and pin, Fig. 26, as shown, for a right hand upper quadrant mechanism	119-8425	
4a	as above, for a right hand lower quadrant mechanism	120-8425	
5	Segment and Shaft, for a right hand upper quadrant top post signal mechanism or a 60 degree lower quadrant dwarf signal mechanism, as shown	116-8425	
6	Segment and shaft, with stop stud, Fig. 23, for a right hand upper quadrant dwarf signal mechanism, as shown	125-8425	
7	Stop, for frame, Fig. 2b, for a 60 degree right hand lower quadrant dwarf signal mechanism	19-C-8143	
8	Coupling, with pin, Fig. 24, for a top post signal mechanism, as shown	21-C-7554	
9	Coupling, with stud, Fig. 22, and pin, Fig. 24, for a right hand upper quadrant dwarf signal mechanism, as shown	14-C-8143	

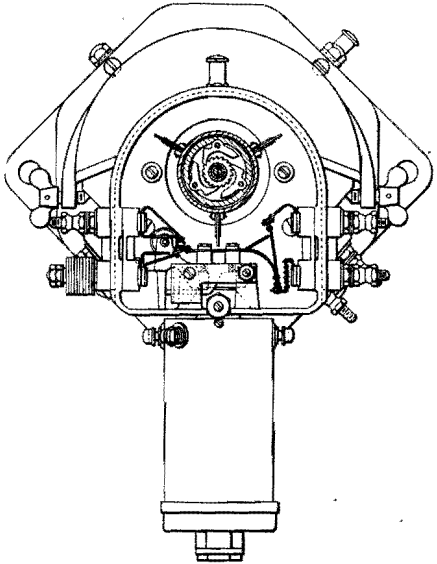
THE UNION SWITCH & SIGNAL CO.

DETAILS FOR TWO AND THREE POSITION RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

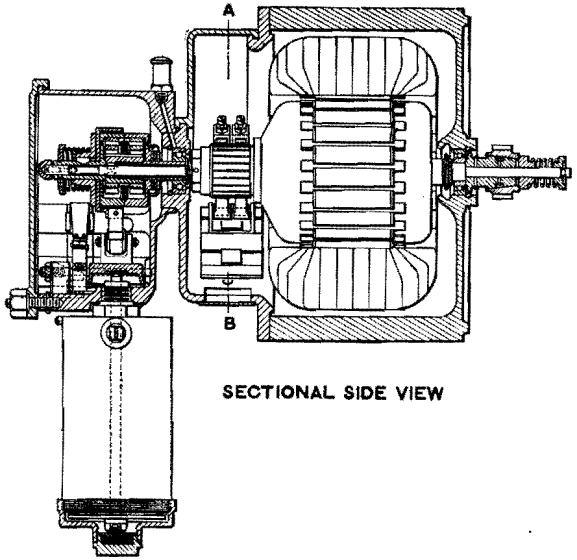
Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

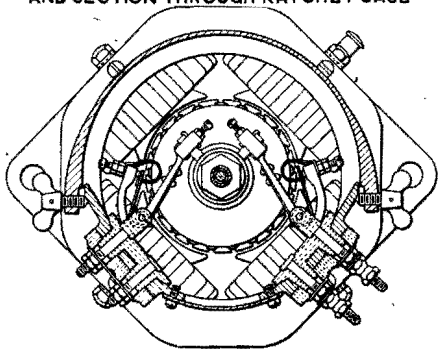
Fig.		Drawing Reference	
10	Coupling, with stud, Fig. 22, for a right hand lower quadrant dwarf signal mechanism, as shown	16-C-8143	
11	Roller Bearing, as shown	14-B-7490	
12	Ball Bearing, No. 03, as shown		
13	Nut, for front plate, Fig. 1	144a-8265	
14	Bushing, used in hub of intermediate gear, Fig. 3	417-8350	
15	Oil Cup, No. 4 Style "D", with tube, "A" dimension 5 13/16", for lower bearing in front plate, Fig. 1	14-C-8079	
16	Oil Cup, No. 4 Style "D," with tube, "A" dimension 5 1/16", for upper bearing in front plate, Fig. 1; also upper bearing in frames, Figs. 2, 2a and 2b	13-C-8079	
17	Oil Cup, No. 4 Style "D," with tube, "A" dimension 5 5/16", for lower bearing in frames, Figs. 2, 2a and 2b	15-C-8079	
18	Shaft only, for segment drivers, Figs. 4 and 4a	3-C-8079	
19	Stud, 5/8"x6 1/4", with hex. nut only, for fastening motor to mechanism	101-8071	
20	Stud, 3/4"x2 1/2", with hex. nut only, for frames, Figs. 2, 2a and 2b, for fastening mechanism to case	95-8261	
20a	Stud, 3/4"x4 1/4", with hex. nut only, for frames, Figs. 2a and 2b, for fastening mechanism to case	96-8261	
21	Stud only, 1/2"x1 3/16", for front plate, Fig. 1	98-8115	
22	Stud only, 7/16"x1 1/8", for couplings, Figs. 9 and 10	308-8114	
23	Stop Stud only, for segment and shaft, Fig. 6	264-8114	
24	Pin, No. 10x3 3/8", for fastening couplings, Figs. 8 and 9, to segment and shafts, Figs. 5 and 6	594-8097	
25	Pin only, No. 12x1 7/16", for fastening studs, Figs. 20 and 20a, in frames, Figs. 2, 2a and 2b	406-8097	
26	Pin only, No. 12x1 1/4", for fastening shaft, Fig. 18, in segment drivers, Figs. 4 and 4a	401-8097	
27	Cap Screw, 1/2"x1 1/2", for fastening front plate, Fig. 1, to frame, Fig. 2, 2a or 2b		
28	Cap Screw, 1/2"x1 3/8", for fastening circuit controller to mechanism		
29	Mach. Screw, rd. hd., No. 14-24x1 1/16", for fastening stop, Fig. 7, to frame, Fig. 2b		
30	Washer, used on shaft of segment driver, Fig. 4	66-8112	
31	Pipe Plug, 3/8"		



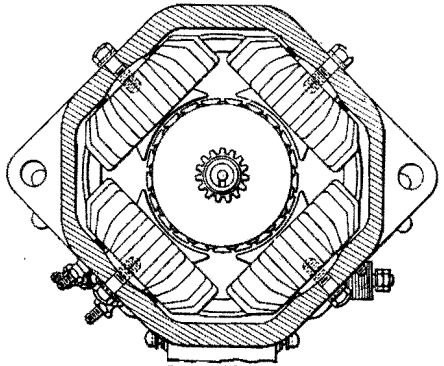
FRONT VIEW SLOT COVER REMOVED
AND SECTION THROUGH RATCHET CASE



SECTIONAL SIDE VIEW



FRONT VIEW
SECTION THROUGH A-B



BACK VIEW
SECTION THROUGH MOTOR FIELD

A

D. C. MOTOR, SLOT AND MAGNET FOR STYLE "T-2" TOP POST AND DWARF SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

PLATE G-94

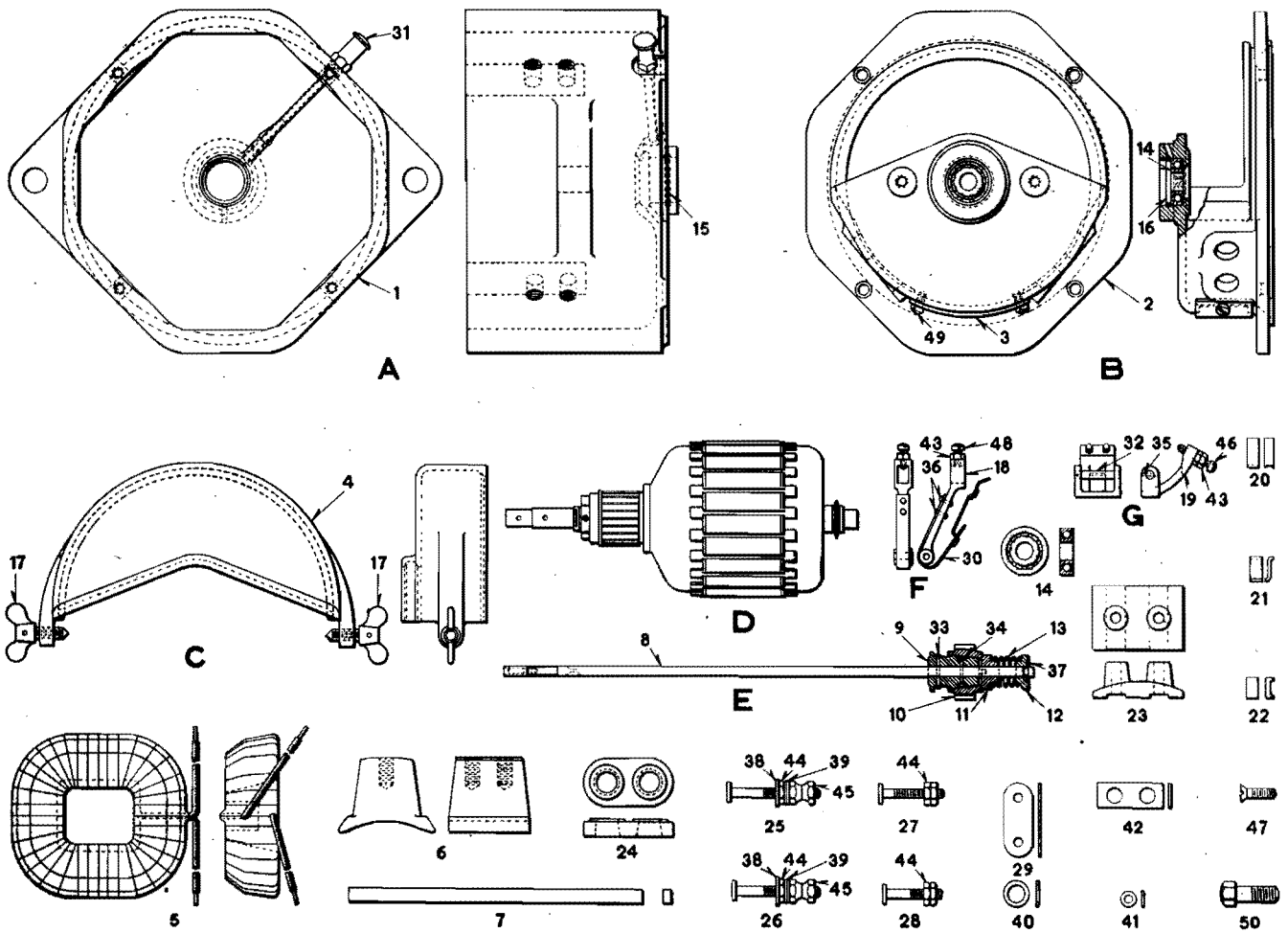
THE UNION SWITCH & SIGNAL CO.

D. C. MOTOR, SLOT AND MAGNET FOR STYLE "T-2" TOP POST AND DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
A	Motor, Slot and Magnet, for right hand upper quadrant mechanism, complete as shown	5–C–8026 86–B–8342	
Aa	Motor, Slot and Magnet, for right hand lower quadrant mechanism	6–C–8026 86–B–8342	
B	Motor, without slot and magnet, for right hand upper quadrant mechanism	5–C–8026	
Ba	Motor, without slot and magnet, for right hand lower quadrant mechanism	6–C–8026	



DETAILS OF D. C. MOTOR FOR RIGHT HAND UPPER OR LOWER QUADRANT
STYLE "T-2" TOP POST AND DWARF SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

DETAILS OF D. C. MOTOR FOR RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" TOP POST AND DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

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Fig.		Drawing Reference	
A	Motor Field, with retaining ring and oil cup, as shown, (1-1, 1-15, 1-31)	30–C–8027	
B	Front Head, with cover, two No. 10-30x⅜" fil. hd. mach. screws, ball bearing and retaining ring, as shown, (1-2. 1-3, 1-14, 1-16, 2-49)	35–C–8027	
C	Motor Cover, with thumb screws, as shown, (1-4, 2-17)	36–C–8027	
D	Armature, complete as shown	24–C–8027	
E	Main Shaft, with cone, pinion, two spring sockets, spring, key and two rivets, as shown, (1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-33, 1-34, 1-37		
F	Brush Holder, with flat spring, terminal connector, mach. screw, nut and rivets, as shown, (1-18, 1-30, 2-36, 1-48)		
G	Brush Holder Support, with pin, mach. screw, nuts and rivet, as shown, (1-19, 1-32, 1-35, 1-46)		
Ga	as above, with brush holders, terminal post, press plates, brushes, nuts and washers, (2-F, 1-G, 2-20, 2-21, 2-22, 1-25, 1-41)		
1	Motor Field only, C. I. Pat. No. 20781	30–C–8027	
2	Front Head only, C. I. Pat. No. 20809	35–C–8027	
3	Cover only, sheet steel, for front head, Fig. B	39–C–8027	
4	Motor Cover only, C. I. Pat. No. 20854	36–C–8027	
5	Field Coil	37–C–8027	
5a	Four Field Coils, connected up and with wire terminals, for a right hand upper quadrant mechanism	38–C–8027	
5b	as above, for a right hand lower quadrant mechanism	38a–C–8027	
6	Pole	26–C–8027	
7	Gasket, used between motor field, Fig. 1, and field coil, Fig. 5	570–8078	
8	Main Shaft only	53–C–8027	
8a	as above, with cone and rivets, (1-8, 1-9, 1-33, 1-34)	59–C–8027	

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DETAILS OF D. C. MOTOR FOR RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" TOP POST AND DWARF SIGNAL MECHANISMS

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Fig.		Drawing Reference	
9	Cone, C. I. Pat. No. 21187, with one No. 52x⅞" and one No. 52x⅝" pins, Figs. 33 and 34	56–C–8027	
10	Pinion only	136–8424	
11	Spring Socket only, for spring, Fig. 13	46–8084	
12	Spring Socket only, for spring, Fig. 13	48–8084	
13	Coil Spring only, for main shaft, Fig. E	260–7770	
14	Ball Bearing only, No. 02, for motor field, Fig. 1, and front head, Fig. 2		
15	Retaining Ring only for retaining ball bearing, Fig. 14, in motor field, Fig. 1	119–8124	
16	Retaining Ring only, for retaining ball bearing, Fig. 14, in front head, Fig. 2	256–7770	
17	Thumb Screw only, for motor cover, Fig. C	18–8331	
18	Brush Holder only, C. B. Pat. No. 20837	27–C–8027	
19	Brush Holder Support only, C. B. Pat. No. 20836	32–C–8027	
20	Brush	9–10332	
21	Press Plate, used between screw, Fig. 48, and brush, Fig. 20	33–C–8027	
22	Press Plate, used between brush, Fig. 20, and brush holder, Fig. 18	34–C–8027	
23	Insulating Block, for terminal posts	1140–8750	
24	Insulating Block, for terminal posts	1141–8750	
25	Terminal Post, with washers and nuts, for brush holder support and external connections, as shown, (1-25a, 1-38, 2-39, 1-44, 2-45)		
25a	Terminal Post only	711–8094	
26	Terminal Post, with washers and nuts, for external connections, (1-26a, 1-38, 2-39, 1-44, 2-45)		
26a	Terminal Post only	802–8094	
27	Terminal Post, with nuts, for brush holder support and internal connections, (1-27a, 2-44)		
27a	Terminal Post only	798–8094	
28	Terminal Post, with nuts, for internal connections, (1-28a, 2-44)		

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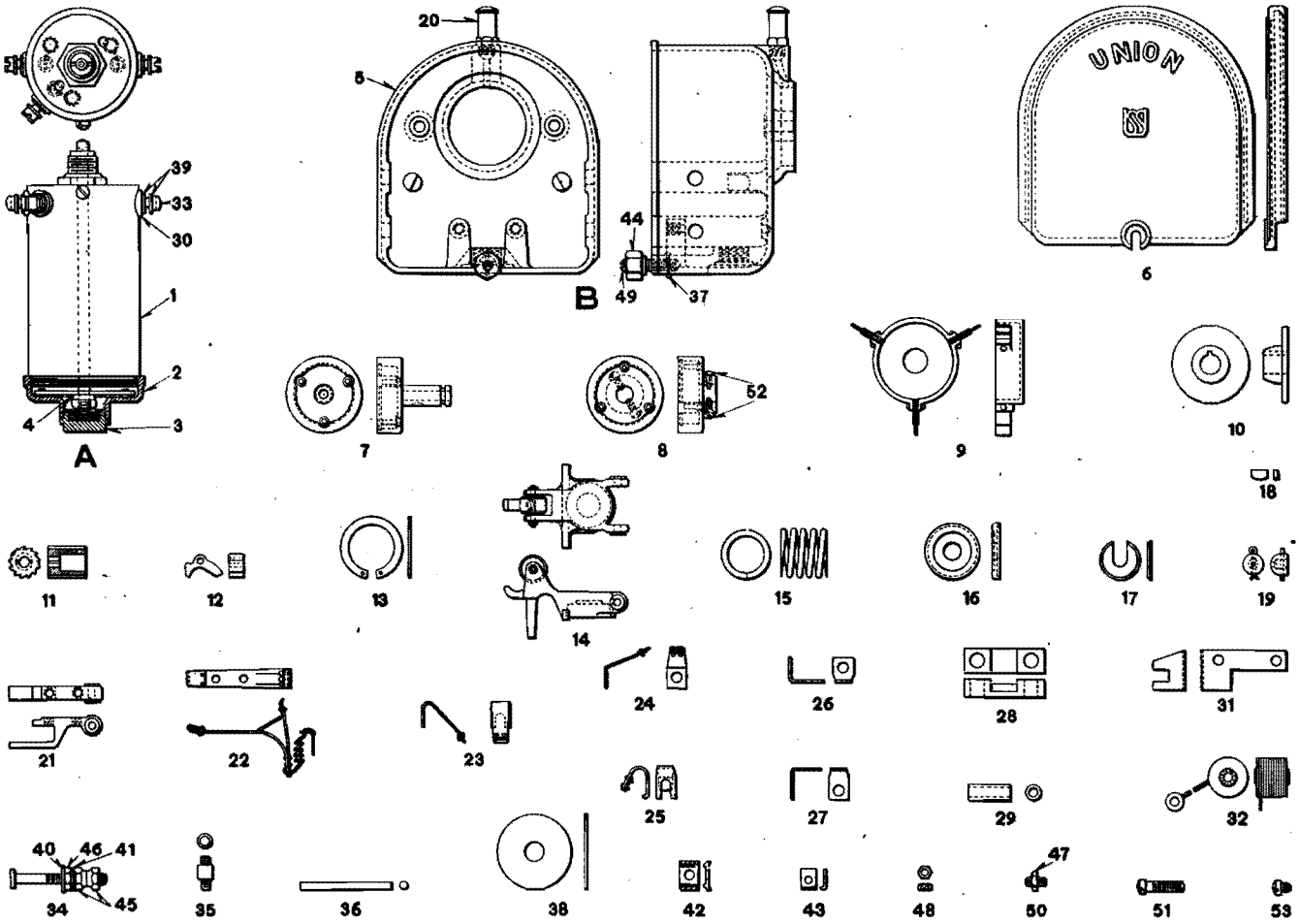
DETAILS OF D. C. MOTOR FOR RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" TOP POST AND DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference
28a	Terminal Post only	804–8094
29	Terminal Connector	286–8064
30	Flat Spring, with terminal and connector	318–8735
31	Oil Cup, No. 4, Style D, with tube, for motor field, Fig. A	16–C–8079
32	Pin only, No. 12x1 5/32", for fastening brush holders, Fig. F, to brush holder support, Fig. G	613–8097
32a	as above, with one No. 51x3/4" rivet, (1-32, 1-35)	
33	Pin only, No. 52x7/8", for fastening cone, Fig. 9, to main shaft, Fig. 8	474–8097
34	Pin only, No. 52x5/8", for fastening cone, Fig. 9, to main shaft, Fig. 8	289–8097
35	Rivet only, No. 51x3/4", for fastening pin, Fig. 32, to brush holder support, Fig. 19	23–B–10301
36	Rivet only, No. 51x1/4", for fastening flat spring, Fig. 30, to brush holder, Fig. 18	21–B–10301
37	Key only, for spring socket, Fig. 12	46–C–8027
38	Washer only, for terminal posts, Figs. 25 and 26	180–7828
39	Washer only, for terminal posts, Figs. 25 and 26	139–7828
40	Washer, used on armature shaft	195–7828
41	Washer, used between brush holders	185–7828
42	Nut Lock Washer, for cap screw, Fig. 50	189–8486
43	Hex. Nut only, for mach. screws, Figs. 46 and 48	192–8109
44	Hex. Nut only, for terminal posts, Figs. 25, 26, 27 and 28	194–8109
45	Lock Nut only, for terminal posts, Figs. 25 and 26	193–8109
46	Mach. Screw, fil. hd., No. 8-36x1", with two hex. nuts, Fig. 43, for brush holder support, Fig. G	808–8098
47	Mach. Screw, flat hd., No. 14-24x3/4", for fastening front head, Fig. B, to motor field, Fig. A	
48	Mach. Screw, fil. hd., No. 8-36x1/2", with one hex. nut, Fig. 43, for brush holder, Fig. F	809–8098
49	Mach. Screw only, fil. hd., No. 10-30x3/8", for fastening cover, Fig. 3, to front head, Fig. 2	
50	Cap Screw, 3/8"-16x1 1/8", for fastening poles, Fig. 6 to motor field, Fig. 1	



DETAILS OF MAGNET AND SLOT FOR RIGHT HAND UPPER OR LOWER QUADRANT
STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

PLATE G-96

THE UNION SWITCH & SIGNAL CO.

DETAILS OF MAGNET AND SLOT FOR RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
A	Magnet, for slot, complete as shown	86–B–8342	
B	Case, with oil cup, for slot, as shown, (1-5, 1-20)		
1	Magnet, with three terminal posts, Fig. 33, six washers, Fig. 39, and three insulating bushings, Fig. 30, only, (without cap, armature and armature stem)	86–B–8342	
2	Cap only, C. B. Pat. No. 21274, Fig. A	110–C–1992	
2a	as above, with nut, (1-2, 1-3)		
3	Nut, C. B. Pat. No. 21275, with washer, disc and felt gasket only, for cap, Fig. 2	131–8082	
4	Armature, with stem, nut and cotter only, Fig. A	56–9595	
5	Case, C. A. Pat. No. 20950, with one No. 14-24x1⅜" headless mach. screw, Fig. 49, one pin, Fig. 37, and one hex. nut, Fig. 44, only, for slot	61–C–8027	
6	Cover, C. A. Pat. No. 20949, for case, Fig. 5	60–C–8027	
7	Driving Ratchet Case, C. B. Pat. No. 21089, with three studs, as shown	49–C–8027	
8	Driving Ratchet Case, C. B. Pat. No. 21090, with three studs, two fil. hd. mach. screws and lock pins, Fig. 52, as shown	50–C–8027	
9	Stop Drum, C. B. Pat. No. 20960, with flat springs and rivets, as shown	48–C–8027	
10	Friction Collar, C. B. Pat. No. 21384	47–C–8027	
11	Ratchet Wheel, for right hand upper quadrant signal, as shown	52–C–8027	

THE UNION SWITCH & SIGNAL CO.

DETAILS OF MAGNET AND SLOT FOR RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

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The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
11a	as above, for right hand lower quadrant signal	52a–C–8027	
12	Pawl	54–9121	
13	Retaining Ring, for holding pawls, Fig. 12, in driving ratchet case, Fig. 7 or 8	51–C–8027	
14	Locking Pawl, C. B. Pat. No. 20961-1, with roller, one No. 30x15/16" pin, four washers and steel disc, for right hand upper quadrant signal, as shown	63–C–8027	
14a	as above, C. B. Pat. No. 20961-2, for right hand lower quadrant signal	64–C–8027	
15	Coil Spring, for friction collar, Fig. 10	257–7770	
16	Spring Socket, for coil spring, Fig. 15	44–8084	
17	Spring Socket Key	45–C–8027	
18	Key, for fastening friction collar, Fig. 10, to driving ratchet case, Fig. 7, or ratchet wheel, Fig. 11, to shaft	25–9673	
19	Oil Cup, with one 1/16"x3/4" cotter, for end of shaft	44–C–8027	
20	Oil Cup only, No. 4, Style "D," for case, Fig. B		
21	Contact Spring Support, C. A. Pat. No. 21162	54–C–8027	
22	Contact Spring	1326–8385	
23	Contact Spring	1325–8385	
24	Contact Spring	1324–8385	
25	Contact Spring	1245–8385	
26	Flat Spring	374–8735	
27	Flat Spring	375–8735	

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DETAILS OF MAGNET AND SLOT FOR RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
28	Insulating Block, for terminal posts, Figs. 34 and 34a	708–8750	
29	Insulating Bushing, for terminal posts, Figs. 34 and 34a	4–B–10270	
30	Insulating Bushing only, for terminal post, Fig. 33	35–8100	
31	Stop, for right hand upper quadrant signal, as shown	74–C–8027	
31a	as above, for right hand lower quadrant signal	75–C–8027	
32	Resistance Coil	28–9065	
33	Terminal Post only, for magnet, Fig. A	72–8094	
33a	as above, with washers and insulating bushing, (1-30, 1-33, 2-39)		
34	Terminal Post, with washers and nuts, as shown, (1-34b, 1-40, 2-41, 2-45, 1-46)		
34a	Terminal Post, with one washer and two hex. nuts only, (1-34b, 1-40, 2-46)		
34b	Terminal Post only	711–8094	
35	Insulating Stud, for fastening contact spring, Fig. 22, to contact spring support, Fig. 21	199–8095	
36	Pin, No. 15x2⅜", for fastening locking pawl, Fig. 14, and contact spring support, Fig. 21, in case	598–8097	
37	Pin only, No. 52x⅝", for fastening headless screw, Fig. 49, to case	289–8097	

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DETAILS OF MAGNET AND SLOT FOR RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

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The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
38	Washer, used between stop drum, Fig. 9, and friction collar, Fig. 10; also used between stop drum, Fig. 9, and driving ratchet case, Fig. 7	712–8078	
39	Washer only, for terminal post, Fig. 33	4–7828	
40	Washer only, for terminal post, Fig. 34b	138–7828	
41	Washer only, for terminal post, Fig. 34b	139–7828	
42	Lock Washer, used between head of terminal post, Fig. 34b, and insulating block, Fig. 28	111–8486	
43	Nut Lock Washer, for hex. nut, Fig. 48	64–B–8486	
44	Hex. Nut only, for headless screw, Fig. 49	285–8109	
45	Lock Nut only, for terminal post, Fig. 34	193–8109	
46	Hex. Nut only, for terminal post, Fig. 34	194–8109	
47	Hex. Nut only, for headless screw, Fig. 50	220–8109	
48	Hex. Nut, for stud, Fig. 35	23–B–8109	
49	Headless Screw only, No. 14-24x1⅜", for case, Fig. B	847–8098	
50	Headless Screw, No. 12-28x$\frac{9}{16}$", and hex. nut, Fig. 47, for fastening pin, Fig. 36, in case	514–8098	
51	Mach. Screw, fil. hd., No. 14-24x1", for fastening slot case to motor		
52	Mach. Screw, fil. hd., No. 8-36x.3462, with lock pin, for fastening driving ratchet case, Fig. 8, to armature shaft	822–8098	
53	Mach. Screw, fil. hd., No. 12-28x¼", for fastening stop, Fig. 31, to case		

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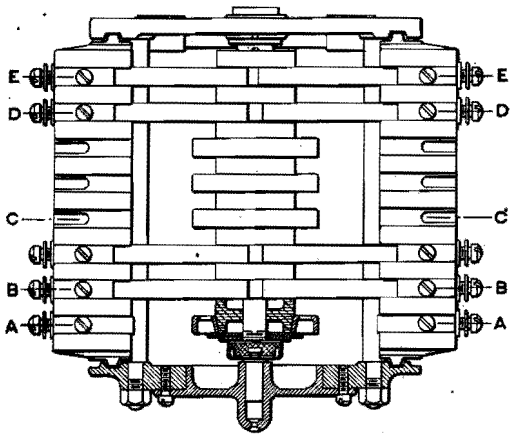
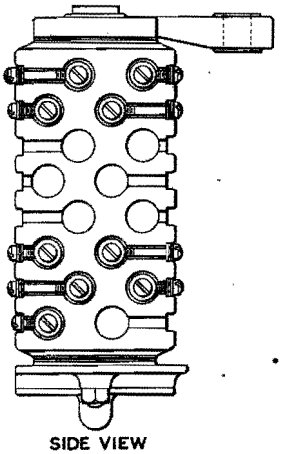
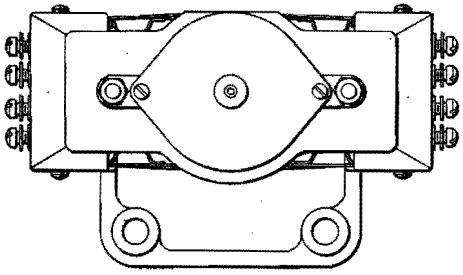


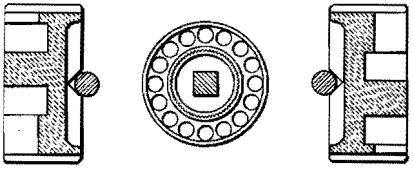
PLAN VIEW



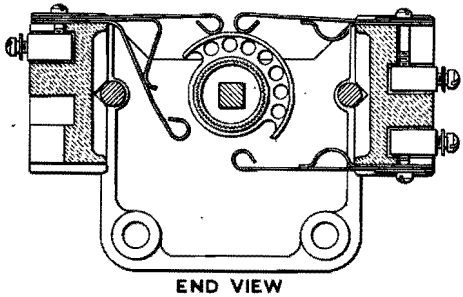
SIDE VIEW



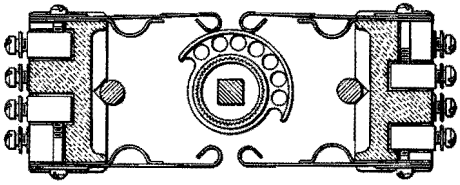
END VIEW



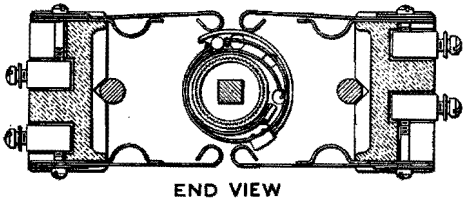
END VIEW
SECTION C-C
BLANK SEGMENT



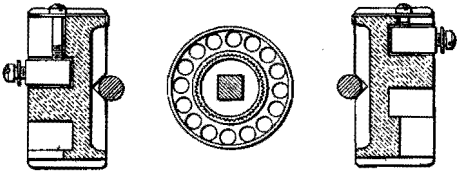
END VIEW
SECTION E-E
MOTOR CONTROL



END VIEW
SECTION B-B
POLE CHANGER



END VIEW
SECTION D-D
SLOT CONTROL



END VIEW
SECTION. A-A
BLANK SEGMENT

A

CIRCUIT CONTROLLERS FOR TWO AND THREE POSITION
RIGHT HAND UPPER OR LOWER QUADRANT
STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

CIRCUIT CONTROLLERS FOR TWO AND THREE POSITION RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

The circuit controllers listed below are equipped with only such contacts as are required for the operation of signal and the pole changer as specified. If extra contracts are required, the order should specify the number and state where circuits are to make and break; that is, considering the stop position as 0 degree, give the position of signal blade where circuits are to make and break or submit a wiring diagram.

Order by Name, Plate, Figure and Instructions given above.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
A	Circuit Controller, with pole changer, for a 90 deg. three position right hand upper quadrant top post signal mechanism, complete as shown	23–B–11001	
Aa	as above, without pole changer, for a 90 deg. three position right hand upper quadrant top post or dwarf signal mechanism	1–B–11001	
Ab	Circuit Controller, with pole changer, for a 90 deg. two position right hand upper quadrant top post signal mechanism	B–11001	
Ac	as above, without pole changer, for a 90 deg. two position right hand upper quadrant top post or dwarf signal mechanism	8–B–11001	
Ad	Circuit Controller, for a 60 deg. two position right hand lower quadrant dwarf signal mechanism	B–11002	

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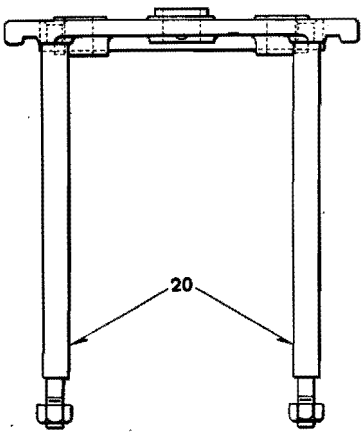
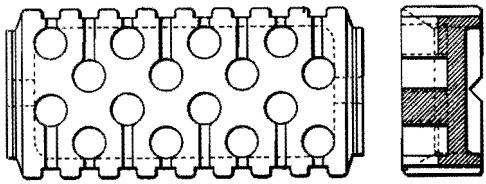
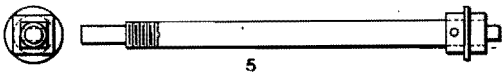
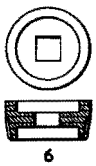
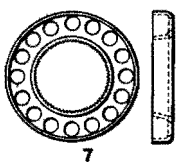










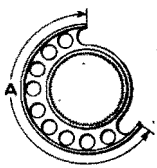
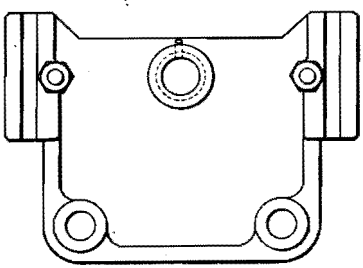
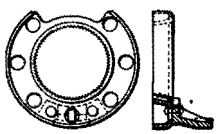
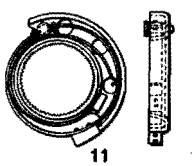
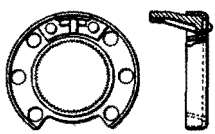


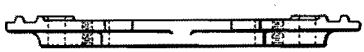
FIG.	A	FIG.	A
8	59 Deg.	8f	210 Deg.
8a	135 "	8g	213 "
8b	161 "	8h	234 "
8c	180 "	8j	290 "
8d	190 "	8k	310 "
8e	200 "	8m	330 "

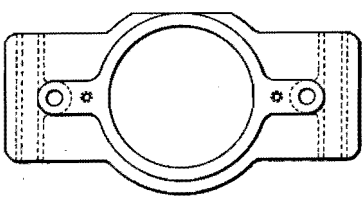


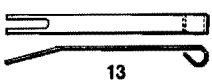


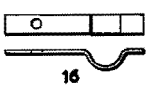


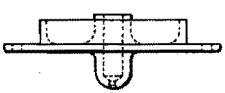


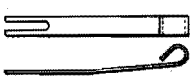


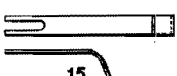


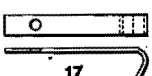


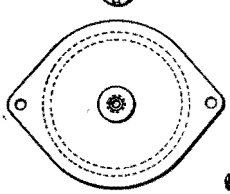


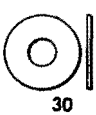


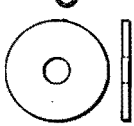


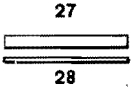












DETAILS OF CIRCUIT CONTROLLER FOR TWO AND THREE POSITION RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

THE UNION SWITCH & SIGNAL CO.

DETAILS OF CIRCUIT CONTROLLER FOR TWO AND THREE POSITION RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
1	Back Plate, C. I. Pat. No. 20584, with two studs and hex. nuts, Fig. 20, as shown	46–C–8003	
2	Front Plate, C. I. Pat. No. 21101	47–C–8003	
2a	as above, with front bearing, (1-2, 1-3, 2-27)		
3	Front Bearing, C. I. Pat. No. 21104	48–C–8003	
4	Terminal Block	223–9968	
5	Shaft, with sleeve, and pin, as shown	14–9956	
5a	as above, with insulating separators, blank contact segments, nut, washers and cotter, (1-5, 8-6, 8-7, 1-29, 1-30, 1-32, 1-33)		
6	Insulating Separator, for shaft, Fig. 5	1106–8750	
7	Blank Contact Segment	62–8429	
8	Contact Segment, "A" dimension 59°	62a–8429	
8a	" " " " 135°	62d–8429	
8b	" " " " 161°	62i–8429	
8c	" " " " 180°	62i–8429	
8d	" " " " 190°	62j–8429	
8e	" " " " 200°	62c–8429	
8f	" " " " 210°	62b–8429	
8g	" " " " 213°	62g–8429	
8h	" " " " 234°	62f–8429	
8j	" " " " 290°	62k–8429	
8k	" " " " 310°	62h–8429	
8m	" " " " 330°	62e–8429	
9	Front Segment, for pole changer to operate at 85°	67–8429	
10	Rear Segment, for pole changer to operate at 85°	68–8429	
11	Drag Segment, for slot control	65–8429	
12	Contact Spring, for making contact with segment any degree between 10° and 20° off vertical center	1165–8385	
13	Contact Spring, for making contact with segment any degree between vertical center and 10° off	1323–8385	
14	Contact Spring, for making contact with segment 30° off vertical center	1247–8385	
15	Contact Spring	1292–8385	
16	Flat Spring, used in connection with contact springs, Figs. 12, 13 and 14	344–8735	

THE UNION SWITCH & SIGNAL CO.

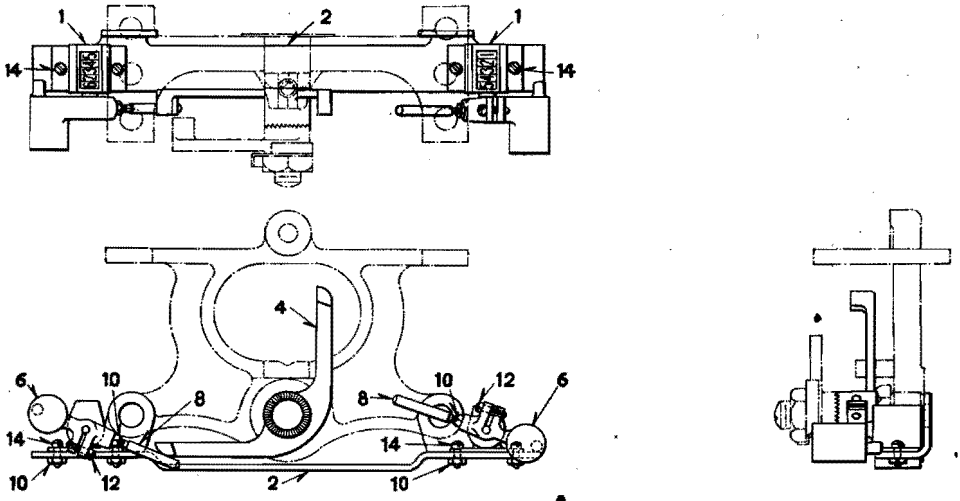
DETAILS OF CIRCUIT CONTROLLER FOR TWO AND THREE POSITION RIGHT HAND UPPER OR LOWER QUADRANT STYLE "T-2" D. C. TOP POST AND DWARF SIGNAL MECHANISMS

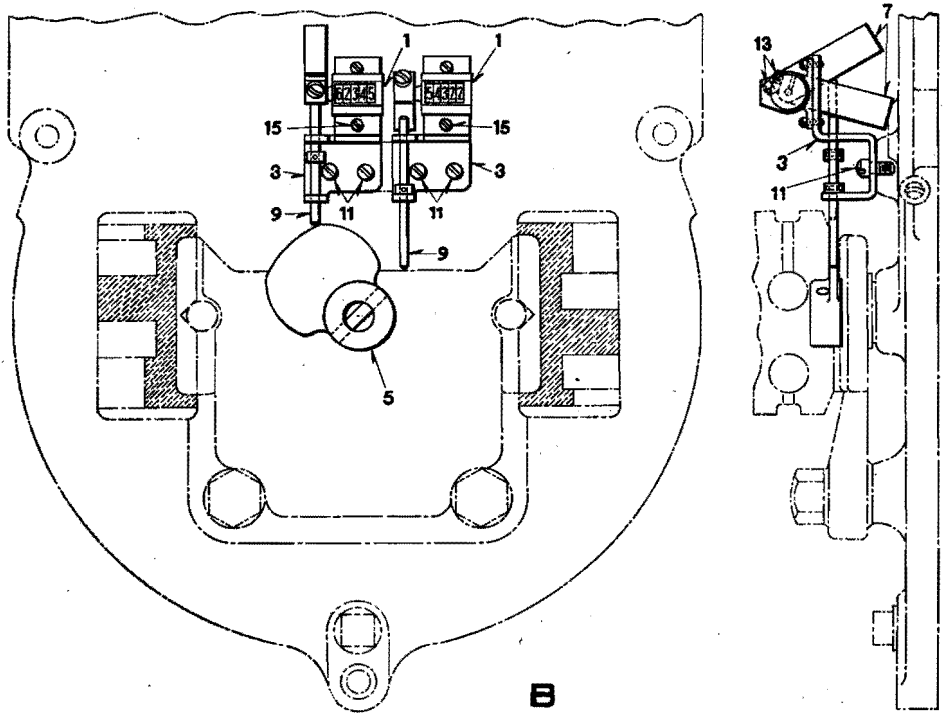
Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
17	Flat Spring, used in connection with contact spring, Fig. 15	347–8735	
18	Flat Spring	286–8735	
19	Flat Spring, used to hold terminal post in place when no contact spring is used	356–8735	
20	Stud, ½″x8⅝″, with one ⅝″ hex. nut only, for back plate, Fig. 1	81–8115	
21	Terminal Post	854–8094	
21a	as above, with one No. 10-30x⅞″ and one No. 14-24x⅝″ fil. hd. mach. screws and washer, (1-21, 1-24, 1-26, 1-31)		
21b	as above, substituting one No. 10-30x¾″ for one No. 10-30x⅞″ fil. hd. mach. screw, (1-21, 1-25, 1-26, 1-31)		
21c	as above, substituting one No. 10-30x1½″ for one No. 10-30x¾″ fil. hd. mach. screw, (1-21, 1-22, 1-26, 1-31)		
21d	as above, substituting one No. 10-30x1⅜″ for one No. 10-30x1½″ fil. hd. mach. screw, (1-21, 1-23, 1-26, 1-31)		
22	Mach. Screw, fil. hd., No. 10-30x1½″, for terminal post, Fig. 21, when contact springs are used		
23	Mach. Screw, fil. hd., No. 10-30x1⅜″, for terminal post, Fig. 21, when no contact springs are used		
24	Mach. Screw, fil. hd., No. 10-30x⅞″, for terminal post, Fig. 21, when contact springs are used		
25	Mach. Screw, fil. hd., No. 10-30x¾″, for terminal post, Fig. 21, when no contact springs are used		
26	Mach. Screw, fil. hd., No. 14-24x⅝″, for fastening wire to terminal post, Fig. 21	483–8098	
27	Mach. Screw, fil. hd., No. 10-30x½″, for fastening front bearing, Fig. 3, to front plate, Fig. 2		
28	Gasket, used between terminal block, Fig. 4 and front plate, Fig. 2, or back plate, Fig. 1	58–8274	
29	Insulating Washer, for shaft, Fig. 5	603–8078	
30	Washer, for shaft, Fig. 5	118–7826	
31	Washer, for mach. screw, Fig. 26	139–7828	
32	Castellated Nut, for shaft, Fig. 5	297–8109	
33	Cotter, ⅛″x1½″, for shaft, Fig. 5		

THE UNION SWITCH & SIGNAL CO.





APPLICATION OF VEEDER COUNTERS TO STYLE "T" AND "T-2" D. C. MECHANISMS

THE UNION SWITCH & SIGNAL CO.

APPLICATION OF VEEDER COUNTERS TO STYLE "T" AND "T-2" D. C. MECHANISMS

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	
A	Application of Veeder Counters to Circuit Controller with snap pole changer, for a style "T" mechanism, for registering movements in the clear and caution positions, as shown, (2-1, 1-2, 1-4, 2-6, 4-14)	59–A–2489	
Aa	as above, for a two position signal or for registering clear or caution position only of a three position signal, (1-1, 1-2, 1-4, 1-6, 2-14)		
B	Application of Veeder Counters to a style "T-2" Mechanism, for registering clear and caution positions, as shown, (2-1, 2-3, 1-5, 2-7, 2-9, 4-11, 4-15)	74–A–2489	
Ba	as above, for a two position signal or for registering clear or caution position only of a three position signal, (1-1, 1-3, 1-5, 1-7, 1-9, 2-11, 2-15)	73–A–2489	
1	Veeder Counter only		
2	Bracket only, Figs. A and Aa	60–A–2489	
3	Bracket only, Figs. B and Ba	77–A–2489	
4	Operating Arm, C. B. Pat. No. 21198, with ⅛"x1" cotter only, Figs. A and Aa	204–8192	
5	Cam, C. B. Pat. No. 21382, with one No. 12x1⅛" pin, Fig. 5a, Figs. B and Ba	78–A–2489	

THE UNION SWITCH & SIGNAL CO.

APPLICATION OF VEEDER COUNTERS TO STYLE "T" AND "T-2" D. C. MECHANISMS

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference
5a	Pin only, No. 12x1⅛", for cam, Fig. 5	400–8097
6	Counterweight, C. B. Pat. No. 21197, with arm and hex. nut, Fig. 8, and one No. 6-40x⅜" fil. hd. mach. screw, Fig. 12, Figs. A and Aa	61–A–2489
7	Counterweight, with one No. 6-40x5/16" fil. hd. mach. screw, Fig. 13, Figs. B and Ba	75–9672
8	Arm, with hex. nut, Fig. 10, only, for counterweight, Fig. 6	623–8097
9	Plunger, with collar and rivet only, Figs. B and Ba	648–8097
10	Hex. Nut only, for arm, Fig. 10, and mach. screw, Fig. 14	204–8109
11	Mach. Screw, fil. hd., No. 10-30x⅜", for fastening bracket, Fig. 3, to front plate of mechanism	
12	Mach. Screw, fil. hd., No. 6-40⅜", for counterweight, Fig. 6	
13	Mach. Screw, fil. hd., No. 6-40x5/16", for counterweight, Fig. 7	
14	Mach. Screw, fil. hd., No. 4-48x¼", with hex. nut, Fig. 10, for fastening veeder counter, Fig. 1, to bracket, Fig. 2	
15	Mach. Screw, fil. hd., No. 4-48x¼", for fastening veeder counter, Fig. 1, to bracket, Fig. 3	